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⑨ Technical rept.

(SDCS)

SPECIAL DATA COLLECTION SYSTEM EVENT REPORT  
NTS Event 'CHESHIRE', 14 February 1976.

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⑪

June 1976

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VELA Seismological Center  
312 Montgomery Street, Alexandria, Virginia 22314

⑯ NT/4703

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SDCS EVENT REPORT NO. 87

NTS Event "CHESHIRE", 14 February 1976

ACCESSION FOR	
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DOC	Confidential <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
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This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	$m_b$	$M_s$
NORSAR	11:41:32.2	11:30:04	38 N	115 W	5.6	N/A

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

11:30:00.8	37.2N	116.4W	5.6	5.5
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The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report; NORSAR short-period data is obtained from their bulletin. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at all SDCS stations, LASA and NORSAR. Short-period data for HN-ME and WH2YK were retrieved from the field station digital tapes. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at all SDCS stations were rotated.

Long-period signals were recorded at all SDCS stations. Long-period data for HN-ME and WH2YK were retrieved from the field station digital tapes. All LP channels at HN-ME and the LP radial channel at RK-ON had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal LP channels at all SDCS stations were rotated.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

## STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES DEG MN SEC'S	ELEVATION METERS	INSTRUMENTATION SHORT-PERIOD LONG-PERIOD
ALPA	Alaska	65 14 00.0 N 147 44 36.0 W	626	None 31300
CPSO	McMinnville, Tennessee	35 35 41.4 N 085 34 13.5 W	574	6480 V 7515 H SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 58.0 N 079 30 47.0 W	910	KS36000 KS36000
LASA	Billings, Montana	46 41 19.0 N 106 13 20.0 W	744	HS10 7505A V 8700C H
HN-ME	Houlton, Maine	46 09 43.0 N 067 59 09.0 W	213	KS36000 KS36000
NORSAR	Kjeller, Norway	60 49 25.4 N 010 49 56.5 E	379	HS10 7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 20.0 N 093 40 20.0 W	366	18300 SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 41.0 N 134 58 02.0 W	855	18300 SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be  $16^\circ + 5^\circ$  based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT      14 FEB 76  
 11:30:00.0      37.000N      116.000W      0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
LAO	11 32 54.3	0.0	0.1	12.1	35.2
RK-ON	11 34 46.6	-0.4	-0.5	21.2	42.6
CPSO	11 35 22.9	-0.7	-0.5	24.8	84.3
WH2YK	11 35 37.8	0.2	0.4	26.3	339.3
FN-WV	11 36 02.4	0.7	0.7	29.0	75.9
HN-ME	11 37 09.7	0.7	0.6	36.8	60.3
NAO	11 41 32.2	-0.5	-0.8	73.3	24.0

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
11:30:05.2	37.260N	116.300W	26. CALC	0.6	3	7
11:30:00.8	37.159N	116.376W	0. REST	0.6	3	7

CALC	REST
1 . 1	1 . 1
0 : 0	0 : 0
0 0 . 3 2	0 0 . 3 2
0 . 0 . 0 0	0 . 0 . 0 0
0 : 0	0 : 0
0 : 0	0 : 0

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF.. LEVEL, SDV= 1.68  
 MAJOR      61.8KM. MINOR      38.0KM. AZ=      31 AREA=      7368 SQ.KM. REST

## DATA SUMMARY

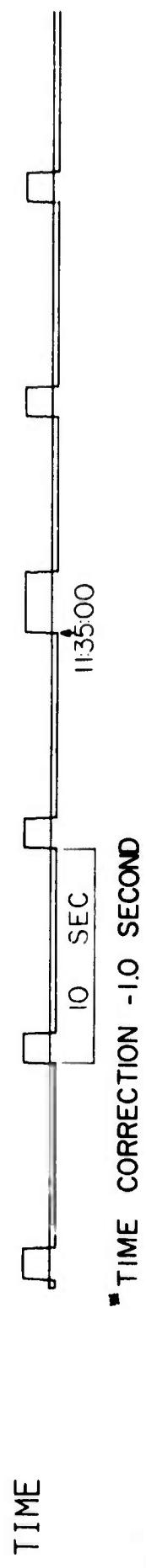
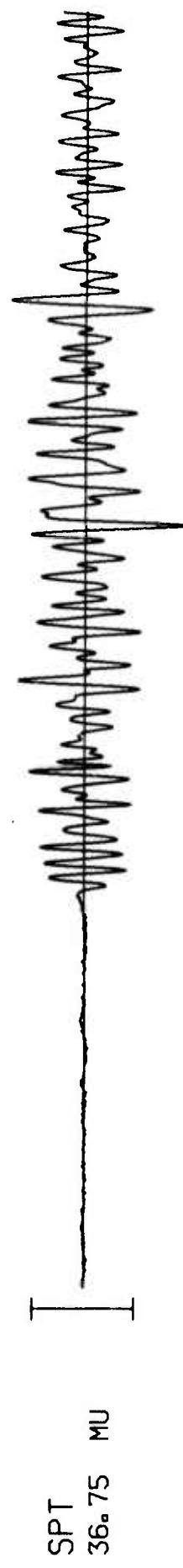
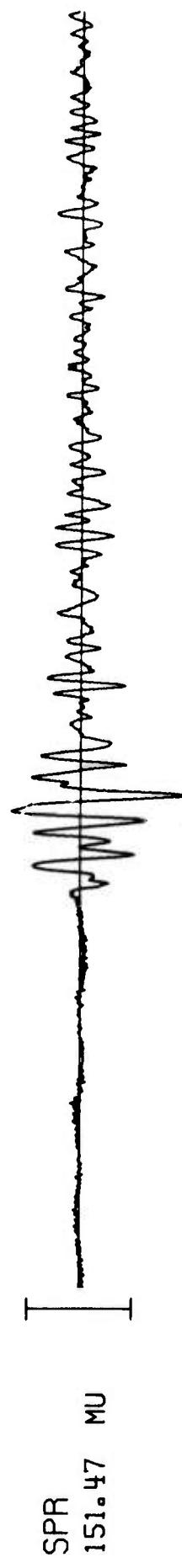
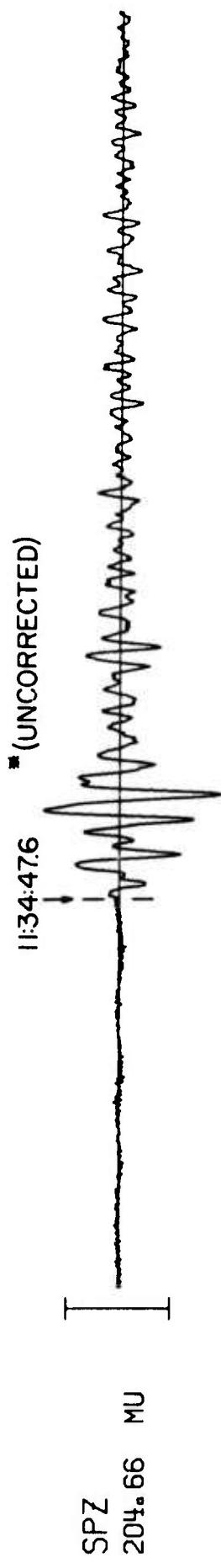
INPUT FOR EVENT 14 FEB 76  
 11:30:00.0 37.000N 116.000W 0KM.

STA.	PHASE	ARRIVAL				MAGNITUDE			
		TIME	INST	PER	A/T	MB	MS	DIF	DIST
LAO	EP	11 32 54.3	SAB	99.9	9999.				
RK-ON	EP	11 34 46.6	SPZ	0.9	243.	5.20			21.2
RK-ON	LQ	11 42 19.0	LPT	15.0	213.				
RK-ON	LR	11 43 41.0	LPZ	13.0	1144.	5.50			21.2
CPSO	EP	11 35 22.9	SPZ	0.9	1204.	6.24			24.8
CPSO	LQ	11 43 43.0	LPT	17.0	616.				
CPSO	LR	11 45 26.0	LPZ	13.0	2761.	5.96			24.8
WH2YK	EP	11 35 37.8	SPZ	1.0	116.	5.20			26.3
WH2YK	LQ	11 44 47.0	LPT	20.0	477.				
WH2YK	LR	11 46 47.0	LPZ	17.0	848.	5.47			26.3
FN-WV	EP	11 36 02.4	SPZ	0.6	65.	5.11			29.0
FN-WV	LQ	11 45 56.0	LPT	19.0	698.				
FN-WV	LR	11 48 01.0	LPZ	15.0	1419.	5.73			29.0
HN-ME	FP	11 37 09.7	SPZ	1.0	642.	6.03			36.8
HN-ME	LQ	11 49 58.0	LPT	18.0	392.				
HN-ME	LR	11 52 55.0	LPZ	16.0	229.	5.05			36.8
NAO	EP	11 41 32.2	AB	0.8	120.	5.65			73.3

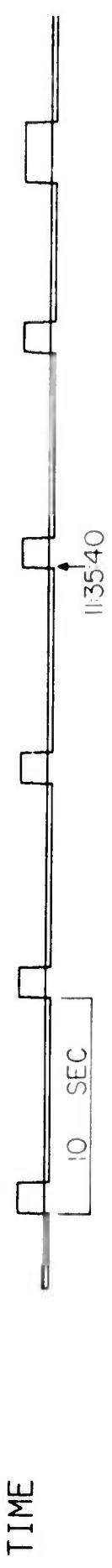
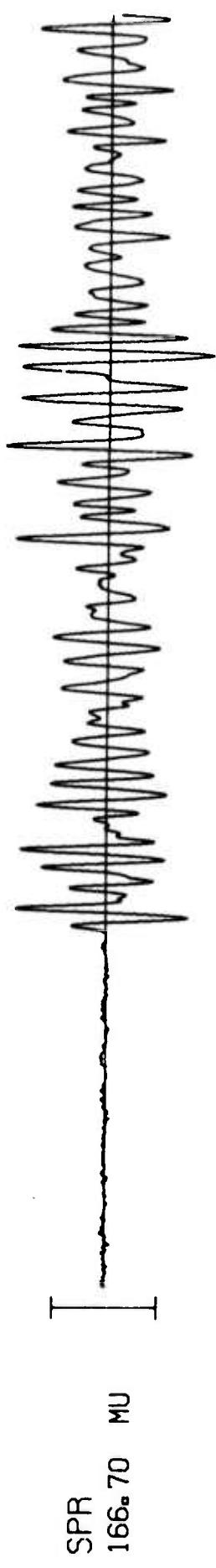
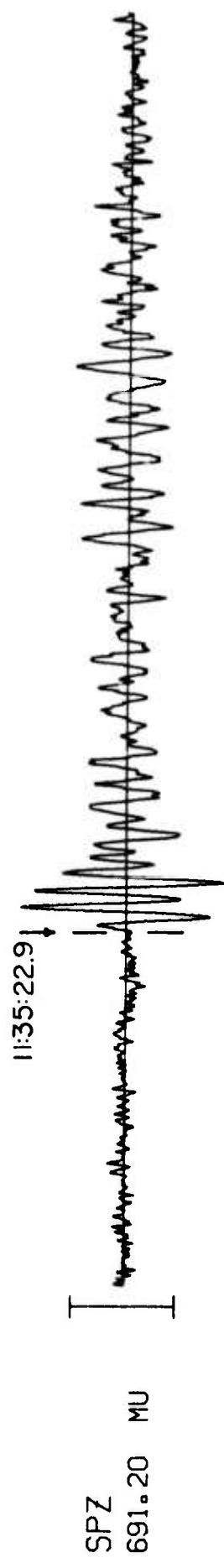
ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPSDV	LPSTA
11:30:05.2	37.260N	116.300W	26. CALC	5.54	0.49	6	5.47*****		1
11:30:00.8	37.159N	116.376W	0. REST	5.57	0.48	6	5.47*****		1

Average long-period magnitude ( $M_S$ ) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

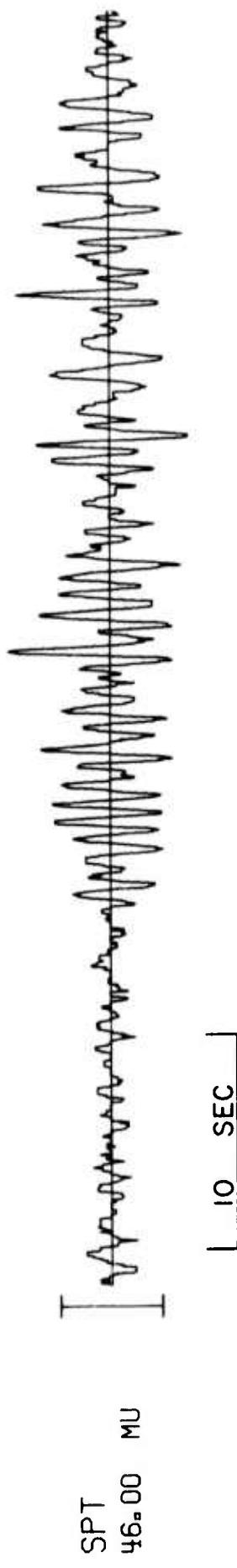
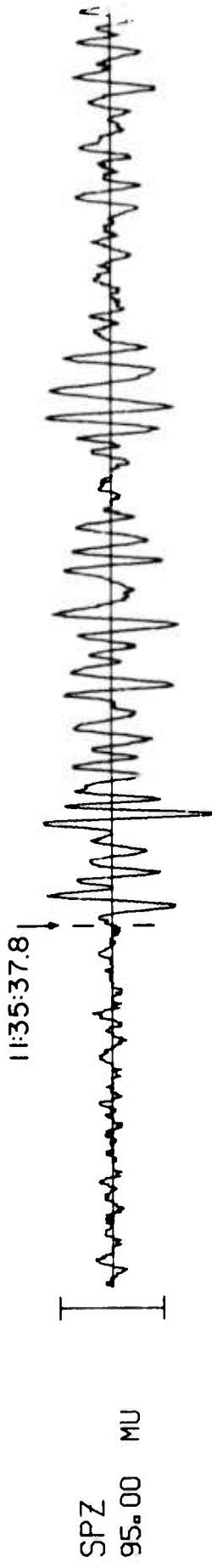
RK-ON 14 FEB 76



CPSO 14 FEB 76

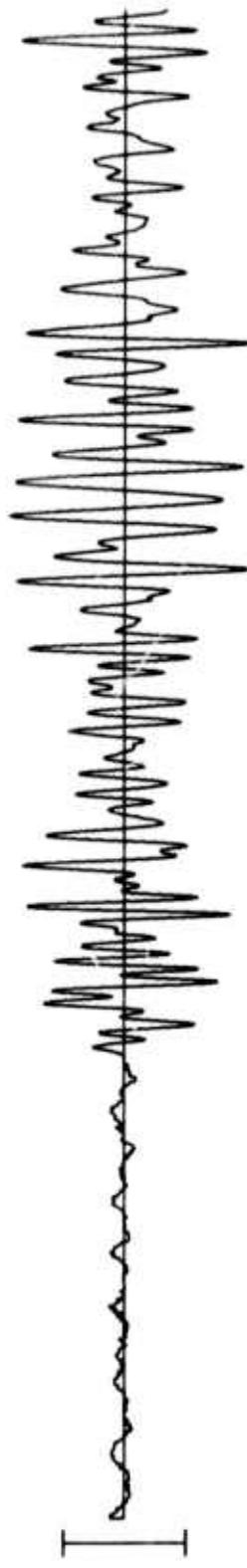
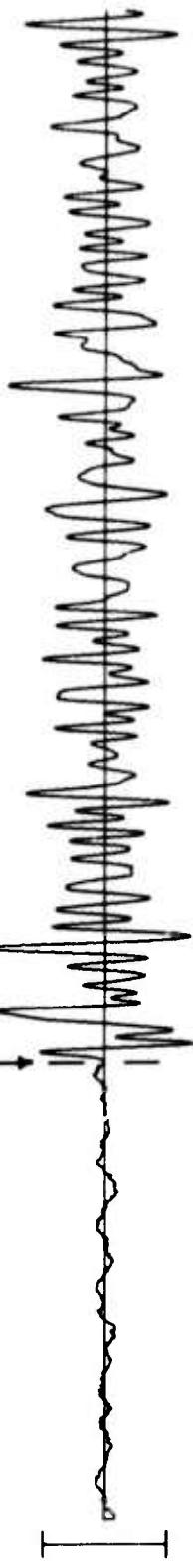


WH2YK 14 FEB 76

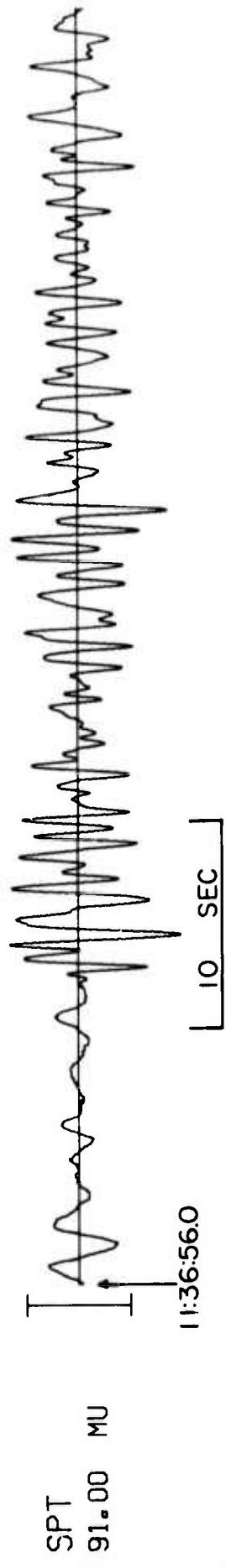
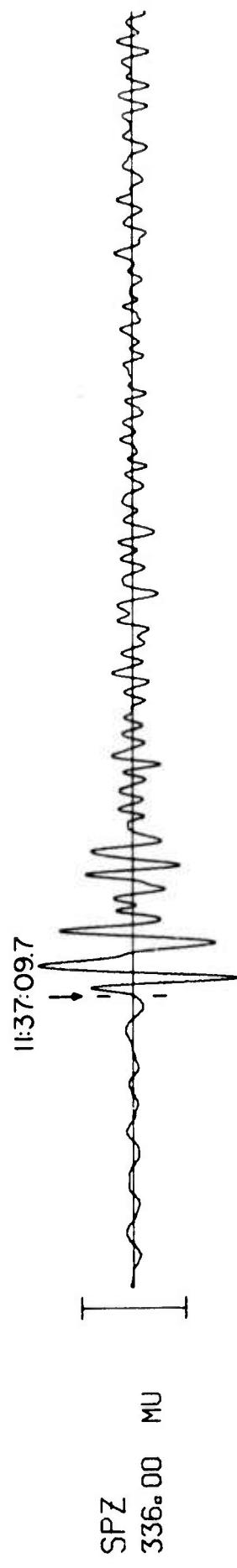


FN-WV 14 FEB 76

11:36:02.4

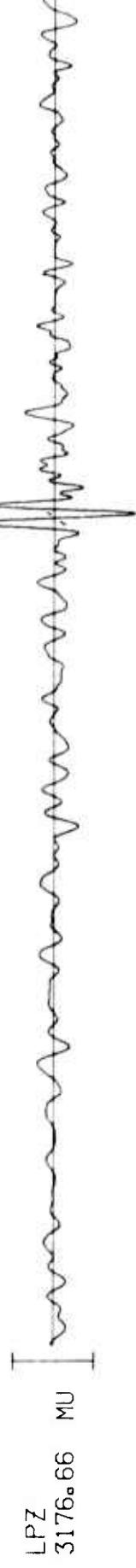


HN-ME 14 FEB 76



RK-DN 14 FEB 76

1143.42 \* (UNCORRECTED)



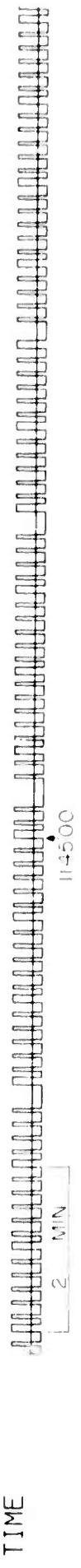
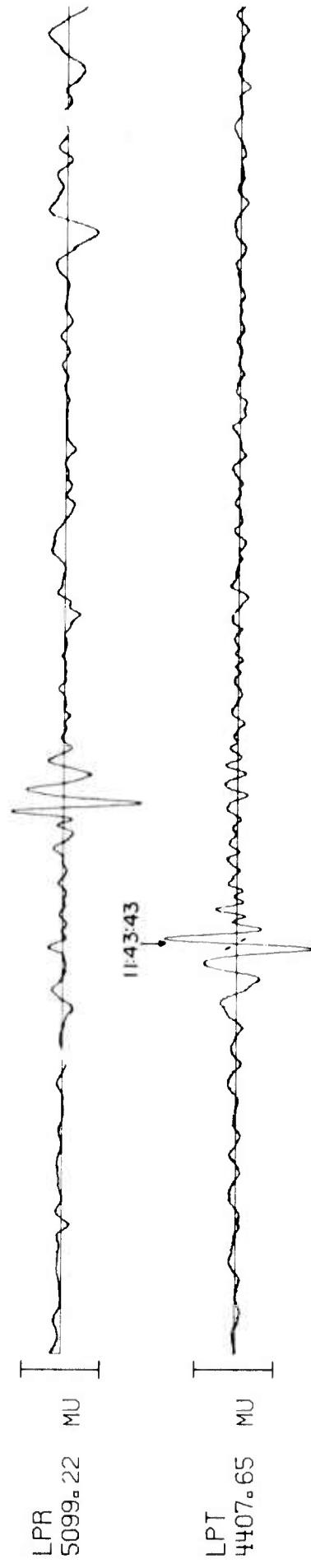
TIME

1140.00 2 MIN

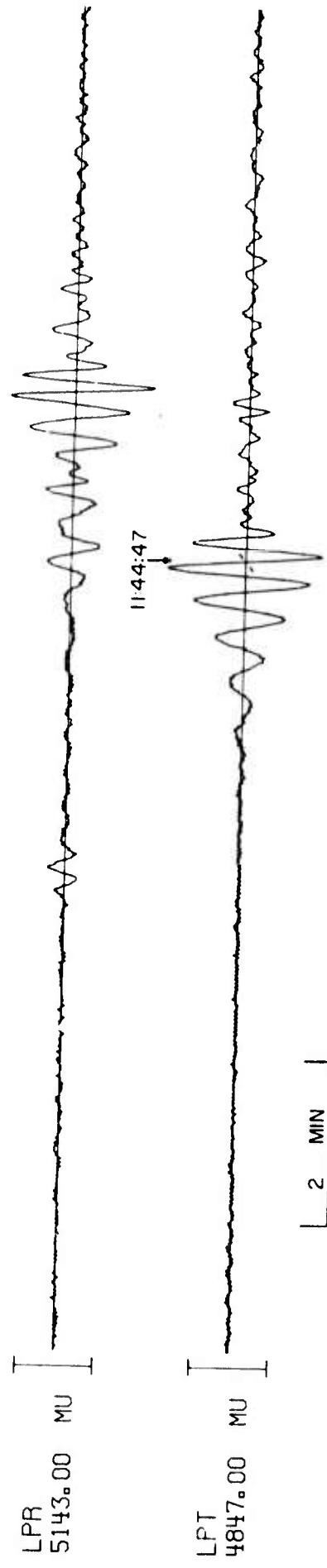
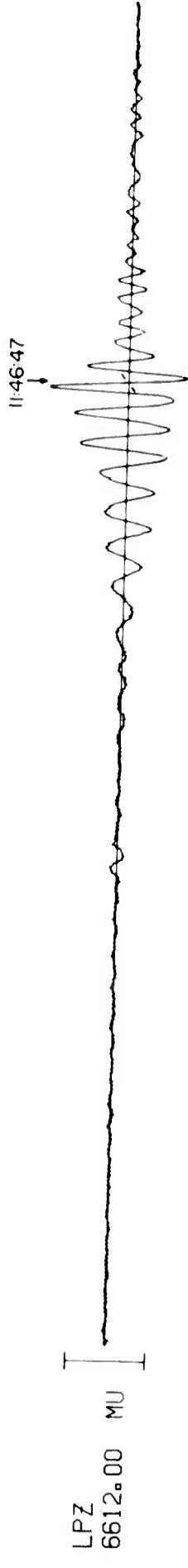
\* TIME CORRECTION -1.0 SECOND

CPSU 11 FEB 76

11:45:26

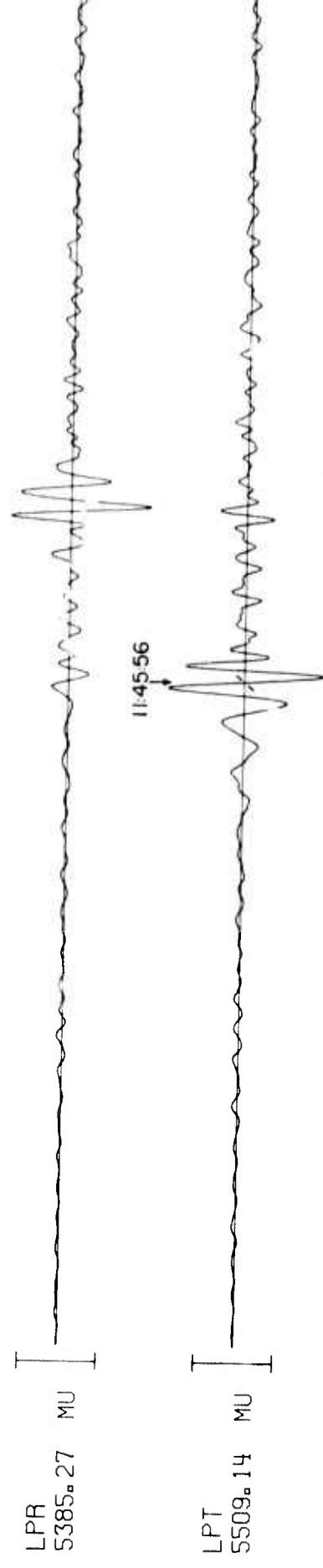
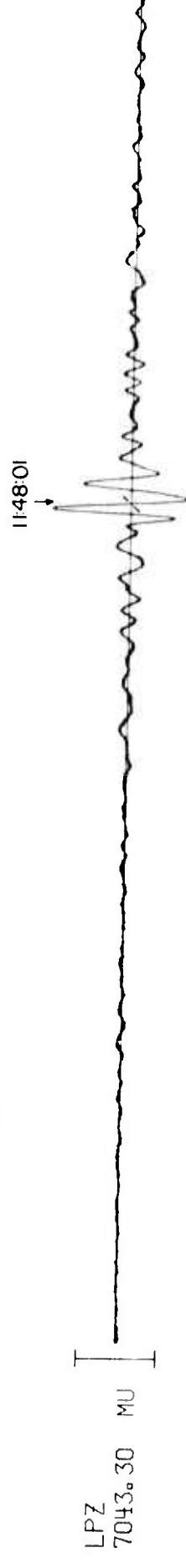


WH2YK 14 FEB 76



2 MIN

FN-WV 14 FEB 76



TIME



HN-ME 14 FEB 76

